



**NASSAU COUNTY FIRE COMMISSION
OFFICE OF THE FIRE MARSHAL**

Nassau County Public Safety Center
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(516) 573-9900 / nassaucountyny.gov

Scott D. Tusa
Chief Fire Marshal

April 30, 2014

Carbon Monoxide Detection Proposal for Inclusion in the Current NCFPO

This is to advise that the Nassau County Legislature has approved the Nassau County Fire Prevention Ordinance addition of Article VIII 'The Carbon Monoxide Law'; which was passed unanimously on April 28, 2014, and signed into law by County Executive Edward Mangano on April 30, 2014. I have attached a Fire Marshal Bulletin with detailed compliance instructions to assist you with inspection, plan development, installation and maintenance. Thank you to everyone who assisted us and supported this very important life safety law.

Sincerely,

Michael F. Uttaro
Assistant Chief Fire Marshal
Inspection Division
Nassau County Fire Marshal's Office

ARTICLE VIII

Carbon Monoxide Detection and Carbon Monoxide Detection Systems

Section 8.0 Scope

This Article shall specify requirements of carbon monoxide detection and carbon monoxide detection system installation and maintenance where systems and detection are required. Where there is a difference between the provisions of this Article and the New York State Uniform Fire Prevention and Building Code or any federal or local law, ordinance, administrative code, rule or regulation, the more restrictive shall apply.

Section 8.1 Adoption of Generally Accepted Standards

8.1.1 The following National Fire Protection Association ("NFPA") Standards, are adopted in Nassau County and incorporated by reference into this Article:

NFPA 70-2008 National Electric Code

NFPA 72-2007 National Fire Alarm and Signaling Code

NFPA 720-2012 Installation of Carbon Monoxide (CO) Detection and Warning Equipment

8.1.2 Where there is a difference between the provisions of this Article and the standards referenced in this Article the provisions of this Article and/or the New York State Uniform Fire Prevention and Building Code shall apply.

8.1.3 The Fire Marshal may permit deviations from the NFPA Standards listed above or this Article, pursuant to Section 2.3 Orders, of this Ordinance only when it has been conclusively proven to the Fire Marshal that such deviations meet the performance requirements of this Ordinance. Such variances granted by the Nassau County Fire Commission constitute compliance with this Ordinance.

Section 8.2 Definitions

The following words and terms shall, for the purpose of this section and as used elsewhere in this Ordinance, have the meanings shown herein. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

APPROVED – Acceptable to the authority having jurisdiction.

CARBON MONOXIDE ALARM – A single-or multiple-station carbon monoxide alarm responsive to carbon monoxide.

MULTIPLE STATION CARBON MONOXIDE ALARM – A single station carbon monoxide detection alarm capable of being interconnected to one or more additional alarms so that the actuation of one causes the appropriate alarm signal to operate in all interconnected alarms.

SINGLE STATION CARBON MONOXIDE ALARM - A detector comprising an assembly that incorporates a sensor, control components, and an alarm notification appliance in one unit operated from a power source either located in the unit or obtained at the point of installation.

CARBON MONOXIDE DETECTION CONTROL UNIT – A component of the carbon monoxide detection system, provided with primary and secondary power sources, which receives signals from initiating devices or other carbon monoxide detection control units, and processes these signals to determine part or all of the required carbon monoxide detection system output function(s).

CARBON MONOXIDE DETECTOR – A device connected to an alarm control unit having a sensor that responds to carbon monoxide.

CARBON MONOXIDE SAFETY FUNCTIONS – Building and carbon monoxide functions that are intended to increase the level of life safety for occupants or to control the spread of the harmful effects of carbon monoxide.

CARBON MONOXIDE WARNING EQUIPMENT – Any detector, alarm, device, or material related to single and multiple station alarms or household carbon monoxide detection systems.

CONTROL UNIT – A system component that monitors inputs and controls outputs through various types of circuits.

DWELLING UNIT – One or more rooms arranged for the use of one or more individuals living together, providing complete, independent living facilities, including permanent provisions for living, sleeping, eating, cooking, and sanitation.

FUEL-BURNING APPLIANCE – A device that burns solid, liquid, or gaseous fuel or a combination thereof.

MULTI-PURPOSE ALARM – An alarm that incorporates detection capabilities for more than one hazardous condition, such as fire, fuel gas, or carbon monoxide.

NOTIFICATION APPLIANCE – A system component such as a bell, horn, speaker, light, or text display that provides audible, tactile, or visible outputs, or any combination thereof.

PROTECTED PREMISES – The physical location protected by a carbon monoxide detection system.

SEPARATE SLEEPING AREA – The area of a dwelling unit where the bedrooms or sleeping areas are located.

SIGNAL –

Carbon Monoxide Alarm Signal. A signal indicating a concentration of carbon monoxide at or above the alarm threshold that could pose a risk to the life safety of the occupants and that requires an immediate action.

Supervisory Signal. A signal indicating the need for action in connection with a pre-alarm condition, or in connection with the supervision of protected premises carbon monoxide safety functions or equipment, or the maintenance features of related systems.

Trouble Signal. A signal initiated by a system or device indicative of a fault in a monitored circuit, system, or component.

SYSTEM –

Carbon Monoxide Detection System. A system or portion of a combination system that consists of a control unit, components, and circuits arranged to monitor and annunciate the status of carbon monoxide initiating devices and to initiate the appropriate response to those signals.

Combination Carbon Monoxide Detection System. A carbon monoxide detection system in which components are used, in whole or in part, in common with a non-carbon monoxide signaling system, and in which components are not used as part of a fire alarm system.

Combination System. A fire alarm system in which components are used, in whole or in part, in common with a non-fire signaling system.

Household Carbon Monoxide Detection System. A system of devices that uses a control unit to produce an alarm signal in the household for the purpose of notifying the occupants of the presence of concentrations of carbon monoxide that could pose a life safety risk.

Section 8.3 General Design Requirements

8.3.1 Carbon Monoxide Detection Systems installed in the County of Nassau shall provide life safety protection and notification for the premise that requires the installation of the system. Where a Fire Alarm System exists within an occupancy, then the Carbon Monoxide Detection Systems shall be interconnected to the existing Fire Alarm Systems.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind.
2. Carbon monoxide alarms in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

8.3.2 All Carbon Monoxide Detection and Carbon Monoxide Systems installed and maintained in the County of Nassau shall be in compliance with this Ordinance, the New York State Uniform Fire Prevention and Building Code, NFPA 70, NFPA 72, and NFPA 720. All carbon monoxide detection devices shall be listed or approved by a nationally recognized testing laboratory for the purpose for which they are intended and shall be installed in conformity with nationally recognized standards. All initiating devices shall latch upon alarm activation.

- 8.3.3** Carbon Monoxide Detection required for existing buildings shall have the system installed and approved by the Fire Marshal by January 1, 2015.

Exceptions:

Carbon Monoxide Detectors are permitted to be plug in type devices or solely battery operated: in existing buildings where no construction is taking place; in buildings that are not served from a commercial power source; and in existing areas of buildings undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes. Plans and a licensed contractor shall not be required for the installation of these plug-in type devices or solely battery operated devices for existing buildings.

- 8.3.4** Carbon Monoxide Detectors are considered life safety devices and therefore shall send trouble signals to the control panel and facilitate wiring supervision.
- 8.3.5** Carbon Monoxide Detectors shall be located and installed on the ceiling in the same room as permanently installed fuel burning appliances.
- 8.3.6** Carbon Monoxide Detectors shall be centrally located on every habitable level and in every HVAC zone of the building.
- 8.3.7** In dwelling units, Carbon Monoxide Detection must be installed outside each separate sleeping area, each room used for sleeping purposes and on every level of a dwelling unit, including basements.
- 8.3.8** Assembly occupancies shall require additional Carbon Monoxide Detectors in every room accommodating fifty (50) or more occupants.
- 8.3.9** Carbon Monoxide Detectors interconnected to Fire Alarm Control Panels shall initiate a temporal four (4) alarm sequence upon activation of the Carbon Monoxide Detector.
- 8.3.10** Carbon Monoxide Detectors ceiling mounted shall be located a minimum of twelve (12) inches from any wall or as specified by manufacturers specifications.
- 8.3.11** Carbon Monoxide Detectors wall mounted shall be minimum of eighty (80) inches off the finished floor and at least six (6) inches from the ceiling or as specified by manufacturer's specifications.

Section 8.4 Carbon Monoxide Detection Occupancy Requirements

8.4.1 Group A Assembly occupancies - Carbon Monoxide Detection shall be required to be installed in Group A Assembly occupancies. All new and existing Assembly occupancies shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of this Article and NFPA 720.

8.4.2 Group B Business occupancies - Carbon Monoxide Detection shall be required to be installed in Group B Business occupancies. All new and existing Business occupancies shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of this Article and NFPA 720.

8.4.3 Group E Educational occupancies - Carbon Monoxide Detection shall be required to be installed in Group E Educational occupancies. All new and existing Educational occupancies shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of this Article and NFPA 720.

8.4.4 Group F Factory occupancies - Carbon Monoxide Detection shall be required to be installed in Group F Factory occupancies. All new and existing Factory occupancies shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of this Article and NFPA 720.

8.4.5 Group H High Hazard occupancies - Carbon Monoxide Detection shall be required to be installed in Group H High Hazard occupancies. All new and existing High Hazard occupancies shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of this Article and NFPA 720.

8.4.6 Group I Institutional occupancies - Carbon Monoxide Detection shall be required to be installed in Group I Institutional occupancies where required by and in accordance with the Fire Code of New York State and this Article. All new and existing Institutional occupancies shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of the Fire Code of New York State, this Article and NFPA 720.

8.4.7 Group M Mercantile occupancies - Carbon Monoxide Detection shall be required to be installed in Group M Mercantile occupancies. All new and existing Mercantile occupancies shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of this Article and NFPA 720.

8.4.8 Group R Residential occupancies - Carbon Monoxide Detection shall be required to be installed in Group R Residential occupancies where required by and in accordance with the Fire Code of New York State. All new and existing Residential occupancies shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of the Fire Code of New York State, this Article and NFPA 720.

8.4.8.1 Carbon Monoxide Detectors installed individually or in conjunction with combination single and multiple-station smoke alarms for Groups R-1, R-2, R-3, R-4, I-1.

Individual carbon monoxide detectors and or single and multiple-station combination carbon monoxide detection and smoke alarms shall be interconnected into the building fire alarm control panel. Activation of the individual carbon monoxide detector and or single and multiple-station combination carbon monoxide detection and smoke alarms shall provide a supervisory signal to the FACP. A trouble signal shall be transmitted to the FACP upon detection of a failure of a monitored circuit or component.

8.4.9 Group S Storage occupancies - Carbon Monoxide Detection shall be required to be installed in Group S Storage occupancies. All new and existing Storage occupancies, with the exception of parking garages, shall have a complete Carbon Monoxide Detection System installed. The carbon monoxide detection system shall meet the requirements of this Article and NFPA 720.

Section 8.5 *DESIGN DRAWINGS AND SPECIFICATIONS*

8.5.1 All carbon monoxide detection and carbon monoxide systems installed and maintained in the County of Nassau shall be in compliance with this Ordinance, the New York State Uniform Fire Prevention and Building Code, NFPA 70, NFPA 72 and NFPA 720. All carbon monoxide detection devices shall be listed or approved by a nationally recognized testing laboratory for the purpose for which they are intended and shall be installed in conformity with nationally recognized standards. All initiating devices and or circuit shall latch upon alarm activation. Non-latching initiating devices or circuits shall not be permitted.

8.5.1.1 All carbon monoxide detection installed and maintained as a carbon monoxide system shall have a carbon monoxide system design drawing submitted to and approved by the Fire Marshal prior to the installation, alteration, relocation or remodeling of any carbon monoxide detection.

8.5.1.2 All carbon monoxide detection shall be installed and maintained as part of the fire alarm system shall have a fire alarm system design drawing submitted to and approved by the Fire Marshal prior to the installation, alteration, relocation or remodeling of any carbon monoxide detection.

8.5.2 Final Approval

Before requesting final approval of the installation, by the Nassau County Fire Marshal, the installing contractor shall furnish a written Record of Completion Report to the effect that the detection system has been installed in accordance with approved plans and tested in accordance with NFPA 72, NFPA 720 and manufacturer's specifications.

8.5.3 Acceptance Test

Upon completion of the installation, the installer shall perform a test of the detection system in the presence of the Nassau County Fire Marshal. There shall be a final inspection fee charged for this section in accordance with the fee schedule established in Article XXII of this Ordinance.

8.5.4 Plan Submittal Requirements

Carbon monoxide detection installed and interconnected to a fire alarm system, shall have Fire Alarm System plan submittals meeting the requirements of Article XVIII of this Ordinance. There shall be plan review fee charged for this section in accordance with the fee schedule established in Article XXII of this Ordinance.

8.5.4.1 It shall be unlawful for any person, firm or business entity to install, modify, alter, replace, renovate or remodel any carbon monoxide detection without first obtaining approved fire alarm system design drawings from the Nassau County Fire Marshal Office.

8.5.5 Permit Required

All persons or owners of property located within the County of Nassau or the lessees thereof who desire to operate and maintain a carbon monoxide detection system in the County of Nassau shall apply to the Nassau County Fire Marshal for a fire alarm permit on forms provided by the Nassau County Fire Marshal, as per Article XVII.

Section 8.6 *Supervising*

Carbon Monoxide Detection interconnected to a Fire Alarm System shall be supervised by a Remote Supervising Station.

Section 8.7 *Liability for Damages*

This Article shall not be construed to hold the County of Nassau, its officers or employees responsible for any injury to person or damage to property by reason of the inspection or re-inspection authorized herein, or failure to inspect or re-inspect as herein provided or by reason of the approval or disapproval of any fire alarm system authorized herein.

Section 8.8 *License Required*

All persons, firms, business entities or corporations installing, inspecting, testing, and providing maintenance on any Carbon Monoxide Detection System or Fire Alarm System as defined in this Ordinance, shall obtain a license from the New York State, Department of State, Division of Licensing Services.

Section 8.9 *Licensed Alarm Company Identification*

A tag attesting to this inspection of the carbon monoxide detection shall be affixed to the fire alarm control panel (FACP) providing the following information:

1. Name, address and telephone number of the Licensed Alarm Company
2. NYS License number
3. Name of technician installing, servicing, inspection and/or maintenance
4. Signature of technician
5. Information on tag should include the date of work and type of work performed on fire alarm system (new installation, annual inspection/service, repair).

Section 8.10 *Maintenance of Carbon Monoxide Detection interconnected to Fire Alarm Systems*

- 8.10.1** It shall be the responsibility of the owner/lessee of property in Nassau County to have a New York State licensed fire alarm company, perform maintenance on carbon monoxide detection.
- 8.10.2** The Fire Marshal of Nassau County shall have the authority to determine conformance with this Ordinance.
- 8.10.3** All carbon monoxide detection interconnected to fire alarm systems subject to this Ordinance and maintained in the County of Nassau shall be cleaned, inspected and tested in accordance with NFPA 72 and NFPA 720, or the recommendations of the system manufacturer. Whichever requires the more frequent inspections, by a New York State licensed fire alarm company. Written records of inspection shall be maintained on the premises protected and shall include:
1. Date of inspection.
 2. Name of inspecting alarm company and alarm company employee(s) performing the inspection.
 3. Condition of equipment.
 4. Action taken to correct any deficiencies.

8.10.4 Maintenance shall also include verification of signal receipt by the Remote Supervising Station and verification that there is a valid Nassau County Fire Alarm Permit.

Section 8.11 Inspection, Test and Maintenance Service Tags

Carbon Monoxide Detection interconnected to a Fire Alarm System shall have Inspection, Test and Service Tags provided.

Section 8.12 Carbon Monoxide Detection Out of Service

Where approved carbon monoxide detection interconnected to a fire alarm system is out of service the local fire department and the Nassau County Fire Marshal's Office shall be notified immediately. The building shall either be evacuated or, with the approval of the Nassau County Fire Marshal, an approved fire watch shall be provided for all occupants left unprotected by shut down, until fire alarm/carbon monoxide detection is restored to normal operating condition.

Section 8.13 Misuse of Carbon Monoxide Detection interconnected Fire Alarm Systems

Notwithstanding the provisions of this Ordinance, nothing contained herein shall modify, limit, enlarge or in any other way affect the penalties provided for willful or intentional false alarms as same is defined and provided within the New York State criminal codes or statutes. Misuse of carbon monoxide detection interconnected to fire alarm systems shall follow the requirements set forth in Article XVII.

Section 8.14 Failing to Comply

No person, business entity or corporation shall fail to comply with any order or regulation made under this Article.

Section 8.15 Penalties

Any person or business entity other than a corporation violating any provisions of this Article, or failing to comply therewith, or violating or failing to comply with any order or regulation made thereunder, shall upon conviction be guilty of a misdemeanor punishable by a fine not exceeding one thousand (\$1,000.00) dollars or, by imprisonment for not more than one (1) year or, both, for each and every offense. A corporation violating any provision of this Article, or failing to comply therewith, or violating or failing to comply with any order or regulation made thereunder, shall upon conviction be guilty of a misdemeanor punishable by a fine not exceeding five thousand (\$5,000.00) dollars for each and every offense. The imposition of the penalty for any violation of this Article shall not excuse the violation or permit it to continue, and each fifteen (15) days that the prohibited conditions are maintained shall constitute a separate offense.

Proposed amendments to:

ARTICLE XXII Schedule of Fees

22.6.12	Fire Alarm System, Fire Detecting System and/or <u>Carbon Monoxide Detection System</u> Plan Review	\$450.00
22.6.13	Fire Alarm System, Fire Detecting System and/or <u>Carbon Monoxide Detection System</u> Inspection	\$450.00

Underlined text is proposed amendments.



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Chief Fire Marshal
Scott D. Tusa

FIRE MARSHAL BULLETIN

May 1, 2014

To: Nassau County Fire Departments, Town / City / Village Building Departments, Business and Property Owners, and NYS Licensed Alarm Contractors

From: **Assistant Chief Fire Marshal Michael F. Uttaro** - muttaro@nassaucountyny.gov

The recently approved addition of Article VIII to the Nassau County Fire Prevention Ordinance to address the needs for the life safety requirement of carbon monoxide detection in all new and existing commercial buildings within the County of Nassau has raised questions regarding the implementation of this new law, so the following is an explanation of the law and direction on its implementation. Carbon Monoxide Alarms / Detection required for existing buildings shall have the system installed by January 1, 2015.

CARBON MONOXIDE ALARM – A single or multiple-station carbon monoxide alarm responsive to carbon monoxide.

MULTIPLE STATION CARBON MONOXIDE ALARM – A single station carbon monoxide detection alarm capable of being interconnected to one or more additional alarms so that the actuation of one causes the appropriate alarm signal to operate in all interconnected alarms.

SINGLE STATION CARBON MONOXIDE ALARM - A detector / alarm comprising an assembly that incorporates a sensor, control components, and an alarm notification appliance in one unit operated from a power source either located in the unit or obtained at the point of installation.

CARBON MONOXIDE DETECTOR – A device connected to an alarm control unit (Fire Alarm System) having a sensor that responds to carbon monoxide.

Reference Standards:

NFPA 70-2008	National Electric Code
NFPA 72-2007	National Fire Alarm and Signaling Code
NFPA 720-2012	Installation of Carbon Monoxide (CO) Detection and Warning Equip.

New Commercial Occupancies:

- Carbon Monoxide Alarm / Detection devices shall be installed as part of a Fire Alarm System in new occupancies that require a Fire Alarm System to be installed. These device installations shall be submitted as part of the Fire Alarm System plan submission with the required fees and paperwork.
- New occupancies that do not require the installation of a Fire Alarm System shall install Carbon Monoxide Alarm / Detection devices as independent single station or multiple station systems. These devices shall be installed by a NYS licensed alarm company and shall have a letter sent to the Nassau County Fire Marshal's Office on the installer's letterhead verifying their installation and satisfying the requirements of the Nassau County Fire Prevention Ordinance.

Existing Commercial Occupancies:

- Where a Fire Alarm System is maintained within an existing occupancy, the Carbon Monoxide Alarm / Detection devices shall be installed and interconnected to the existing Fire Alarm Systems. These devices shall be installed by a NYS licensed alarm company and shall have a letter sent to the Nassau County Fire Marshal's Office on the installer's letterhead verifying their installation and meeting the requirements of the Nassau County Fire Prevention Ordinance.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind.
 2. Carbon monoxide alarm / detection devices in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.
- Where an existing occupancy does not maintain a Fire Alarm System, the Carbon Monoxide Alarm / Detection devices shall be installed and shall be permitted to be UL listed (or equivalent listing agency) plug in type devices or solely battery operated devices.

Additional Requirement and Installation Information

- Carbon Monoxide Alarm / Detector devices are considered life safety devices and therefore, devices installed as part of a Fire Alarm System shall send trouble signals to the alarm control panel and facilitate wiring supervision.
- Ceiling mounted Carbon Monoxide Alarm / Detector devices shall be located a minimum of twelve (12) inches from any wall or as specified by manufacturers specifications.
- Wall mounted Carbon Monoxide Alarm / Detector devices shall be minimum of eighty (80) inches off the finished floor and at least six (6) inches from the ceiling or as specified by manufacturer's specifications.
- In dwelling units, Carbon Monoxide Alarm / Detection devices shall be installed outside each separate sleeping area, in each room used for sleeping purposes and on every level of a dwelling unit, including basements.
- Assembly occupancies shall require additional Carbon Monoxide Alarm / Detector devices in every room accommodating fifty (50) or more occupants.

- Single station and Multiple Station Carbon Monoxide Alarms shall initiate a temporal four (4) alarm sequence upon activation of the device. Carbon Monoxide Alarm / Detector devices interconnected to Fire Alarm Systems shall initiate a temporal three (3) alarm sequence, as smoke and fire detection shall take precedence.
- Carbon Monoxide Alarm / Detector devices ceiling mounted shall be located a minimum of twelve (12) inches from any wall or as specified by manufacturers specifications.
- Carbon Monoxide Alarm / Detector devices wall mounted shall be minimum of eighty (80) inches off the finished floor and at least six (6) inches from the ceiling or as specified by manufacturer's specifications.
- Carbon Monoxide Alarm / Detector devices shall be located a minimum of three (3) feet from all air registers.